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ABSTRACT

Questionnaire data were obtained from 149 enlisted men in the United States Navy. The job scope/satisfaction with the work itself relationship was examined for the study's total sample and for subsamples created by grouping individuals on the basis of their belief in the Protestant ethic (middle-class work norms and values). Job scope may be interpreted as the degree to which a job is enriched--providing high variety, autonomy, task identity, and feedback. Satisfaction with "the work itself" reflects the degree to which the level of intrinsic rewards derived from a job may meet or exceed the worker's perceived equitable level of rewards. It was hypothesized and found that the job scope-work satisfaction relationship was positive and significantly different from zero for the study's total sample and each of the three Protestant ethic subsamples. Contrary to one of the study's hypotheses, Protestant ethic did not moderate the job scope-work satisfaction relationship. The study's results were discussed in terms of their implications for theory and practice relating to job design. (Author/EA)

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JOB SCOPE, JOB SATISFACTION, AND THE PROTESTANT ETHIC: A STUDY OF ENLISTED MEN IN THE U. S. NAVY

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University of California, Irvine

Technical Report No. 27

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Questionnaire data were obtained from 149 enlisted men in the U.S. Navy. The job scope (JS) - satisfaction with the work itself (SWI) relationship was examined for the study's total sample and for subsamples created by grouping individuals on the basis of their belief in the Protestant Ethic (PE). It was hypothesized and found that the JS-SWI relationship was positive and significantly different from zero for the study's total sample and each of the three PE subsamples. Contrary to

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one of the study's hypotheses, PE did not moderate the JS-SWI relationship. The study's results were discussed in terms of their implications for theory and practice relating to job design.

Job Scope, Job Satisfaction, and the Protestant Ethic: A Study of Enlisted Men in the U. S. Navy

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The extent to which individual differences in work-related values may influence relationships between job characteristics and job satisfaction has been the concern of numerous recent published and unpublished reports (e.g., Blood & Hulin, 1967; Hackman & Lawler, 1971; Hulin & Blood, 1968; Stone, 1974; Stone & Porter, 1973; Turner & Lawrence, 1965; Wanous, 1973; etc.)

In one of these reports (Hulin & Blood, 1968) the position is taken that the relationship between job scope and satisfaction with "the work itself" cannot be assumed to be general, but is instead dependent upon the degree to which workers have internalized the "Protestant Ethic" (i.e., middle-class work norms and values).[2]

In more specific terms, Hulin and Blood (1968) hypothesize that the relationship between job scope and satisfaction with "the work itself" will be positive for workers who have internalized the "Protestant Ethic" (i.e., "integrated" workers) and negative for workers who have not internalized this value system (i.e., "alienated" workers). For workers who are neither integrated with nor alienated from such values (hereinafter referred to as "neutral" workers) Hulin and Blood posit a near zero job scope-satisfaction with "the work itself" relationship (p. 51).

Although more than five years have passed since Hulin and Blood presented their treatise on "job enlargement, individual differences and worker responses," not a single published report has appeared that deals with a <u>direct</u> test of their theoretical model.

The purpose of the research reported here, therefore, is to directly test the Hulin and Blood model. A direct test of the model requires the measurement of job scope (JS), Protestant Ethic (PE) orientation and satisfaction with "the work itself" (SWI).

The literature on job characteristics, work-related values, and job attitudes was recently reviewed by Stone (1974). This review revealed that (a) the bulk of empirical research on the subject supports the position that JS is positively related to SWI--irrespective of the degree to which the PE has been internalized, (b) the studies suggesting support for other than a positive relationship have, in general, methodological problems that cast doubt upon their validity, and (c) there is considerable support for the position that work-related values differ among various segments of the working population.

The review led to the following hypotheses:

H_1: There will be a positive correlation between JS and SWI for the study's total sample.

H_2: There will be a positive correlation (r_a) between JS and SWI for the alienated third of the study's sample (i.e., those in the lower third of the distribution of scores on a measure of PE).

H_3: There will be a positive correlation (r_n) between JS and SWI for the neutral third of the study's sample (i.e., those in the middle third of the distribution of scores on a measure of PE).

H_4: There will be a positive correlation (r_i) between JS and SWI for the integrated third of the study's sample (i.e., those in the upper third of the distribution of scores on a measure of PE).

H_5: The correlation between JS and SWI for the inegrated subsample (r_i) will be of greater magnitude and statistically different than that of the alienated subsample (r_a).

Data from a study of enlisted personnel in the United States Navy were used to test these hypotheses.

Method

Subjects

Data used in the present study were obtained from enlisted Naval personnel serving either aboard ships (e.g., destroyers, destroyer escorts, aircraft carriers, etc.) or at shore installations. Jobs represented in the sample are: (a) Boatswain's Mate, (b) Boiler Technician, (c) Disbursing Clerk, (d) Electronics Technician, (e) Hospitalman/Corpsman, (f) Hull Technician, (g) Machinist's Mate, (h) Personnel Man, (i) Quartermaster, (j) Storekeeper, (k) Torpedoman, and (l) Yeoman. A total of 149 subjects participated in the study, yielding an average of 12.4 questionnaires per job.

For the sample as a whole, the mean age of subjects was 24.4 years. Mean levels of job and organizational tenure were, respectively, 54.9 and 62.0 months. The "average" subject had slightly more than 12 years of schooling.

Instruments

Data were obtained using a self-administered questionnaire with sections that dealt with (a) job characteristics, (b) work-related values, (c) satisfaction with "the work itself," (d) other facets of satisfaction (e.g., pay, supervision, etc.), and (e) demographic data.

Job characteristics. A thirteen item instrument (Stone, 1974, pp. 209-210) was used to measure several different (non-independent) job characteristics:

(a) Variety (V): the extent to which the worker uses different methods, works with different tools or pieces of equipment, varies his pace, and varies his work location; (b) Autonomy (A): the extent to which the worker is able to choose work methods, order of operations, work pace, and tools or pieces of equipment used on the job; (c) Task Identity (TI): the extent to which the worker does a "whole job", i.e., does all that is needed to produce an entire product or provide a complete service; (d) Feedback (F): the degree to which the worker receives information from the task itself and/or others (i.e., customers, co-workers, and supervisors) concerning his performance (in terms of both quantity and quality); (e) Optional Interaction: the degree to which the worker is able to talk to others about non-work matters while working; and (f) Required Interaction: the degree to which the job requires the worker to talk to others during the normal workday.

A job scope (JS) index was formulated using four of the aforementioned characteristics:

$$JS = 2V + 2A + TI + F$$

This definition of JS parallels that used in a similar study involving civilian workers (see Stone, 1974, for the rationale underlying the selection of components and weights for the JS index).[3]

Work-related values. The "Survey of Work Values" instrument (Wollack, Goodale, Wijting, & Smith, 1971) was used to index work-related values in the present study. The instrument measures six aspects of what its developers describe as a "secularized interpretation of [the] Protestant Ethic": (a) Pride in Work (PIW); (b) Job Involvement (JI); (c) Activity Preference (AP); (d) Social Status of the Job (SSJ); (e) Attitude toward Earnings (AE); and (f) Upward Striving (US). (Definitions of each of these constructs are offered in Wollack

et al., 1971). An unweighted linear combination of scores on each of the six scales of the instrument was used to index PE:

$$PE = PIW + JI + AP + SSJ + AE + US$$

This index was based on the assumption that the greater the degree to which a worker simultaneously prefers activity, takes pride in his work, etc., the greater his "overall" degree of belief in the PE value system.

Satisfaction with "the work itself". The Brayfield-Rothe (1951) job satisfaction index was used to measure SWI. For the present study, however, the index's instructions directed the respondent to consider only the "work itself" when responding to the 18 questionnaire items.

Other facets of satisfaction. Five other aspects of satisfaction were each measured with one item scales: (a) satisfaction with pay (SP); (b) satisfaction with promotions (SPr); (c) satisfaction with co-workers (SC); (d) satisfaction with supervision (SS); and (e) satisfaction with working conditions (SWC). (These additional satisfaction measures were used in a number of partial correlational analyses that are discussed at a later point in this paper.)

Demographic data. The final section of the questionnaire was designed to procure data on a number of demographic variables. Included here are such items as age, education, job tenure, organizational tenure, marital status, etc.

Data Collection

Questionnaires were completed by all subjects in group administrations. The investigator conducted all administrations. In the case of land-based personnel the administrations were conducted in classroom facilities of the various installations. In the case of individuals stationed aboard ships the administrations took place on the various vessels. Administrations took

approximately thirty minutes each and were scheduled during the normal duty hours of respondents.

All subjects participated in the research voluntarily. None of the study's potential respondents refused to participate. All questionnaires were completed anonymously.

Results

Table 1 shows interrelationships among JS, SWI, PE, etc. for the study's total sample. Consistent with Hypothesis 1, the JS-SWI relationship is

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Insert Table 1 About Here

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positive and (statistically) significantly different from zero. Hypothesis 1 is, thus, considered confirmed.

The last row in Table 1 shows JS-SWI relationships after the effects of numerous other (possibly confounding) variables have been statistically controlled (via partial correlation). Note that in no instance does the JS-SWI relationship fall below .42. These results suggest that the relationship between JS and SWI is not a function of some third confounding variable. Support for Hypothesis 1 is, as a result, strengthened.[4]

To test Hypotheses 2-4 it was first necessary to create alienated, neutral, and integrated subsamples of workers. In order to do this, all subjects were ranked (from low to high) on the basis of their PE scores. Subjects with ranks of 50 or below were assigned to the alienated subsample (N=52). Individuals with ranks greater than 50 but less than or equal to 100 were placed in the neutral subsample (N=45). Finally, those with ranks of 101 or greater were assigned to the integrated subsample (N=52).[5]

The JS-SWI relationship for the alienated subsample is .42 ($p<.01$, one-tailed test). Hypothesis 2 is, thus, considered supported.

The correlation between JS and SWI for the neutral subsample is .51 ($p<.01$, one-tailed test). Hypothesis 3 is, as a consequence, considered supported.

The relationship between JS and SWI for the integrated subsample is .37 ($p<.01$, one-tailed test). Hypothesis 4 is, therefore, considered supported.

Hypothesis 5 predicts that the JS-SWI relationship for the integrated subsample will statistically differ from (i.e., be greater than) that of the alienated subsample. The two correlations found in the present study for the integrated and alienated subsamples are, respectively, .42 and .37. These two r's do not differ from one another statistically ($\alpha=.10$, two-tailed test). In addition, contrary to the prediction implicit in Hypothesis 5, the correlation for the alienated subsample is of greater absolute size than that of the integrated subsample. Hypothesis 5, is clearly, not supported by the present study's results.

Discussion

Results of the present study showed that: (a) the JS-SWI relationship was positive and significantly different from zero for the study's total sample, (b) the JS-SWI relationship was, similarly, positive and significantly different from zero for each of the three PE subsamples, and (c) the JS-SWI correlation coefficients for the alienated and integrated subsamples did not differ from one another in a statistically significant manner.

The first finding (i.e., a positive JS-SWI relationship for the total sample) was not unexpected. Numerous other researches have produced similar findings: positive relationships between job scope or a correlate of it (e.g., organizational level, skill level, job difficulty, etc.) and job satisfaction

or a correlate of it have been demonstrated in studies by Alderfer (1967) Armstrong (1971), Blauner (1964), Centers (1948), Cummings and El Salmi (1970), Fullan (1970), Hackman and Lawler (1971), Porter (1961, 1962), Porter and Mitchell (1967), Shaw (1960), Shepard (1969, 1970, 1973), Stone (1974), Stone and Porter (1973), Svetlik, Prien, and Barrett (1964), Taylor (1967), Trow (1957), Wanous (1973), etc.

The second basic finding (i.e., positive JS-SWI relationships for the alienated, neutral, and integrated PE subsamples) was also not unexpected (see Hypotheses 2-4). The positive JS-SWI relationship for the integrated subsample conforms with the predictions of Hulin and Blood (1968). The positive JS-SWI relationships for the neutral and alienated subsamples, however, are inconsistent with predictions made by Hulin and Blood: they hypothesize a near zero relationship for the neutral subsample and a negative relationship for the alienated subsample. These predictions of Hulin and Blood are, clearly not supported by the present study's data. And, it would appear from the present study's findings and the results of other studies that have been reported to data (e.g., Stone & Porter, 1973; Stone, 1974; Shepard, 1970; etc.) that there is little or no basis for believing that the JS-SWI relationship should be anything but positive -- irrespective of the degree to which the subsample in question subscribes to "middle-class work norms and values."

The study's final finding (i.e., no difference between the JS-SWI correlations for integrated and alienated workers) was not anticipated. Several other researches (e.g., Hackman & Lawler, 1971; Shepard, 1970; Wanous, 1973; etc.) have shown differential scope-satisfaction relationships for subsamples of workers formed on various bases (e.g., "higher order need strength" differences, "Protestant Ethic" differences, etc.). On the other hand, at least one study

(Stone, 1974) showed that Protestant Ethic did not "moderate" the JS-SWI relationship. More research is, obviously, needed on this topic (i.e., "moderators" of the JS-SWI relationship).

Results of the present study's support the position that job enrichment is an appropriate strategy for not only "integrated" workers, but for "neutral" and "alienated" workers as well. Hulin and Blood write that:

> ...the argument for larger jobs as a means of motivating workers, decreasing boredom and dissatifaction, and increasing attendance and productivity is valid only when applied to certain segments of the work force--white-collar and supervisory workers and nonalienated blue-collar workers (p. 50).

Given the present study's findings and those of numerous other researches (reviewed by Stone, 1974) the arguments advanced by Hulin and Blood appear to have little support.

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Footnotes

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[2]Job scope may be looked upon as the degree to which a job is enriched, i.e., has high variety, autonomy, task identity, and feedback (Hackman & Lawler, 1971; Stone, 1974; Stone & Porter, 1973). Satisfaction with "the work itself" reflects the degree to which the level of intrinsic rewards derived from a job meets or exceeds the worker's perceived equitable level of rewards (Porter & Lawler, 1968; Smith, Kendall, & Hulin, 1969; Lofquist & Dawis, 1969).

[3]A similar definition of job scope has been suggested by Turner and Lawrence (1965).

[4]Within-job analyses showed that the greater the degree to which the PE has been internalized, the greater the level of SWI. This finding obtained for 8 of 9 job groups for which the sample size was large enough to allow for trichotomiztion on PE scores and subsequent comparison of SWI levels for the alienated and integrated subsamples. For the sample as a whole, PE correlated .43 ($p<.01$) with SWI.

[5]Means and standard deviations (shown in parentheses) on the PE index for the three subsamples are 240.94 (8.35) for the integrated subsample, 223.49 (4.40) for the neutral subsample, and 203.52 (10.21) for the alienated subsample.

Table 1

Interrelationships Among Studied Variables

Variable	JS	PE	SWI	SP	SPr	SC	SS	SWC	A	E	JT	OT
Job Scope (JS)	--[a]	32**	50**	19*	30**	27**	30**	20*	26**	-16*	28**	27**
Protestant Ethic (PE)		--	43**	18*	18*	23**	22**	14	35**	-10	28**	33**
Satisfaction with Work Itself (SWI)			--	31**	35**	36**	49**	44**	32**	-12	30**	32**
Satisfaction with Pay (SP)				--	33**	25**	36**	24**	36**	08	24**	34**
Satisfaction with Promotion (SPr)					--	21**	35**	28**	14	-09	13	18*
Satisfaction with Co-workers (SC)						--	42**	28**	08	21**	01	05
Satisfaction with Supervision (SS)							--	34**	26**	10	17*	23**
Satisfaction with Work Cond. (SWC)								--	-02	03	-05	-02
Age (A)									--	-02	87**	94**
Education (E)										--	-17*	-17*
Job Tenure (JT)											--	92**
Organizational Tenure (OT)												--
JS-SWI Partial r's	--	42**	--	47**	44**	45**	42**	47**	46**	49**	45**	45**

*p < .05 (two-tailed test)

**p < .01 (two-tailed test)

[a]N = 149 for all correlation coefficients

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